

REMARKS

Favorable reconsideration of this application is respectfully requested.

The specification is amended by the present response to correct minor grammatical informalities therein.

Claims 3-11, 13-22, and 24-27 are pending in this application. Claims 1, 2, 12, and 23 are canceled by the present response without prejudice. Claims 1 and 2 were rejected under 35 U.S.C. §102(b) as anticipated by U.S. patent 5,930,369 to Cox et al. (herein "Cox"). Claims 1-4, 12, and 24 were rejected under 35 U.S.C. §102(a) as anticipated by U.S. patent application publication 2003/0091213 A1 to Yamakage et al. (herein "Yamakage").<sup>1</sup> Claims 1, 2, 5-11, 13-23, and 25-27 were rejected under 35 U.S.C. §102(e) as anticipated by U.S. patent 7,284,130 to Asano et al. (herein "Asano"). The above-noted rejections are traversed by the present response as now discussed.

Addressing first the rejection of claims 1 and 2 under 35 U.S.C. §102(b) as anticipated by Cox, that rejection is obviated by the present response as claims 1 and 2 are herein canceled without prejudice.

Addressing now the rejection of claims 1-4, 12, and 24 under 35 U.S.C. §102(a) as anticipated by Yamakage, that rejection is traversed by the present response, as now discussed.

Claim 3 is amended by the present response to be rewritten as an independent claim and to specifically recite:

an image-size-reduction unit configured to reduce an image size of the input image signal by reducing resolution of the input image signal and generate a size-reduced image signal[.]

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<sup>1</sup> The initial statement for the rejection in the Office Action of March 28, 2008, page 3, prenumbered paragraph 7 only lists claim 1 as rejected over Yamakage, but the explanation of the rejection also indicates claims 2-4, 12, and 24 as rejected, so it is assumed the rejection was intended to reference each of claims 1-4, 12, and 24. If that understanding is incorrect clarification is requested.

Independent claim 3 additionally recites a “detector” detecting the watermark and elements thereof. Independent claim 24 is herein amended to further recite:

a receiving unit configured to receive the size-reduced image signal from the external device which generates the size-reduced image signal by reducing resolution of the input image signal[.]

The above-noted features are believed to be neither taught nor suggested by Yamakage.

Yamakage discloses a digital watermark detection apparatus that receives a watermarked image signal as an input watermarked image signal via a recording medium or transmission medium,<sup>2</sup> and includes a specific frequency component extraction unit that extracts the same specific frequency component,<sup>3</sup> and a correlation computation unit that makes a correlation operation between the specific frequency component signal and watermarked image signal, and detects embedded watermark information.<sup>4</sup> In other words, in Yamakage the digital watermark detection apparatus detects watermark information from an input image signal.

Yamakage differs from the claims as written as Yamakage does not disclose or suggest detecting watermark information from a *size-reduced image signal* obtained by *reducing resolution of an input image signal*, as required in each of independent claims 3 and 24.

With respect to detecting watermark information in a size-reduced image signal the outstanding Office Action in citing Yamakage states:

(paragraph [0021, cut-out and scaling are both considered as size-reduced, and detecting embedded watermark from the size-reduced image signal]).<sup>5</sup>

In reply, applicants note the cited disclosure in Yamakage in paragraph [0021] is directed to an objective of the device therein, and merely indicates a watermark can be

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<sup>2</sup> Yamakage at paragraph [0084].

<sup>3</sup> Yamakage at paragraph [0085].

<sup>4</sup> Yamakage at paragraph [0089].

<sup>5</sup> Office Action of March 28, 2008, page 3, prenumbered paragraph 7a.

detected “against attacks such as cut-out, scaling, rotation, and the like of an image, without increasing the arithmetic operation volume and circuit scale”. The above-noted disclosure in Yamakage is not directed to an operation in the detection of the watermark information, and does not disclose or suggest that prior to detecting a watermark an image size of an input image signal is reduced by reducing resolution of the input image signal to generate a size-reduced image signal (claim 3), or receiving a size-reduced image signal from an external device that generates the size-reduced image signal by reducing resolution of the input image signal (claim 24). Being able to detect a watermark against an attack of a cut-out or scaling as disclosed in Yamakage is not directed to the above-noted features.

Thereby, applicants respectfully submit each of amended independent claims 3 and 24, and the claims dependent therefrom, patentably distinguish over Yamakage.

Addressing now the rejection of Claims 1, 2, 5-11, 13-23, and 25-27 under 35 U.S.C. §102(e) as anticipated by Asano, that rejection is traversed by the present response.

Independent Claims 5 and 9 are amended by the present response to be rewritten as an independent claim and to further recite:

an image-size-reduction unit configured to reduce an image size of the input image signal by reducing resolution of the input image signal and to generate a size-reduced image signal[.]

Independent claims 25 and 26 now each further recite:

a receiving unit configured to receive the size-reduced image signal from the external device which generates the size-reduced image signal by reducing resolution of the input image signal[.]

The above-noted features are believed to clearly distinguish over Asano.

Asano discloses a digital watermark detection apparatus including a specific frequency component extraction unit that extracts a specific frequency component signal from an input image signal, a correlator that computes a cross-correlation value of a phase-

control specific frequency component signal and an input image signal, and a watermark information estimation unit that filters the cross-correlation value to detect watermark information embedded in the input image signal.<sup>6</sup> In other words, Asano discloses detecting watermark information from an input signal, similarly as in Yamakage.

Similarly as discussed above with respect to Yamakage, Asano does not disclose or suggest detecting watermark information from a *size-reduced image signal obtained by reducing resolution of an input image signal*.

With respect to the feature of generating a size-reduced image signal the outstanding rejection specifically cites Asano at column 2, lines 41-46.<sup>7</sup> In reply applicants note at column 2, lines 41-46 Asano merely indicates being able to accurately detect watermark information weakened by an attack such as scaling or rotation. However, similarly as discussed above with respect to Yamakage, such a disclosure in Asano is not directed to the claimed features in which a size-reduced image signal is detected in an operation for detecting watermark information.

Thereby, applicants respectfully submit each of the claims as currently written also patentably distinguishes over Asano.

The claims as written can also provide a benefit of being able to detect a watermark even if video equipment has no high throughput. For example, when a high definition (HD) image is input to video equipment capable of displaying only a standard definition (SD) image, the input image can be reduced to the SD image.

As discussed above, Yamakage and Asano detect a watermark from an input image and neither Yamakage nor Asano disclose generating a size-reduced image, and thereby in Yamakage and Asano video equipment is required to have the ability to process a HD image in real time.

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<sup>6</sup> See Asano at the Abstract.

<sup>7</sup> Office Action of March 28, 2008, page 4, prenumbered paragraph 8a.

As the claimed invention can detect a watermark from a size-reduced image, the video equipment may only need a capability to process a SD image at real time. Thereby, even if video equipment does not have a high throughput, in the claimed invention a watermark can still be detected.

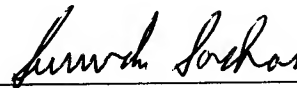
In such further ways the claimed invention differs from the disclosures in both Yamakage and Asano.

In view of the present response, applicants respectfully submit the claims as written are allowable over the previously applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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